

**METHODS AND COMPOSITIONS FOR REVERSIBLE INHIBITION OF  
THERMOSTABLE POLYMERASES**

**Abstract of the Disclosure**

5           Methods for improving sensitivity and specificity of polynucleotide  
synthesis are disclosed. The method includes reversibly blocking thermophilic  
polymerase activity with non-nucleic acid polyanions in a temperature  
dependent manner. The methods control target specific primer extension  
throughout all stages of a DNA or RNA amplification reaction. Corresponding  
compositions and kits are disclosed.

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